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REPORT

INFORMATION REPORT

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SUBJECT 1. Description of Russian-made Electric Thermometer

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2. Descriptions of Russian-made Cameras

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Russian-made electric thermometers and cameras

Attachments:

- A Description of electric thermometer with diagram
- B Description of two types of Russian cameras

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Attachment A

1. The Russian electric thermometer, Type KG, consists of a galvanometer, a thermocouple, and a wire (kompensatsionnyy) connecting the two. It is made of aluminum and weighs about 2 kg.

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2. diagrams of the galvanometer (see next page), the numbers on which refer to the following parts:

- 1 Galvanometer body which is made of aluminum.
 - 2 Glass window which covers the degree scale and measures .13 m x .03 m.
 - 3 Degree scale which measures from 0 to 1600 degrees Centigrade.
 - 4 (a) Rubber plate which measures .06 m x .025m. (b) Two screws which fasten this plate to the galvanometer.
 - 5 Steel magnet which measures .09 m x .05 m.
 - 6 Plate on which magnet is supported by two screws.
 - 7 Pointer indicating temperature. Indicator is a slender aluminum tube about .07 m long and .001 m in diameter.
 - 8 (a) Field magnets made of soft iron. They are solid, weigh about 50 g and measure .02 x .025 x .015 m. They are set side by side but are not connected. (b) Each is fastened by four screws to a rectangular plate .020 x .035 x .002 m which is made of aluminum or other anti-magnetic metal. (c) There is a hole in the center of the plate about .018 m in diameter. This plate supports the moving system (sic). The moving system consists of a coil measuring about .019 x .003 x .021 m which is surrounded by an iron cylinder about .018 x .020 m in size. The coil has an anti-magnetic core wrapped with copper wire. The wire is about .05 mm in diameter. At each end of the axis of the coil there is a small spring made of thin steel. These springs are connected to the point marked 4b in the diagram by two copper wires .2 mm in diameter. The housing of the moving coil is made of an anti-magnetic alloy, and, at the top and bottom of it, the two ends of the coil axis turn. The indicator is set on the upper end of the axis of the moving coil.
 - 9 Narrow cylinder of anti-magnetic metal, about .03 x .008 m., through which two wires pass connecting the galvanometer with the thermocouple.
3. The thermocouple consists of a porcelain tube about .50 m long with a .020 m diameter. It weighs .3 to .4 kilograms. Within the tube are two connected wires. The thermocouple is placed within the heat chamber of the furnace to measure the temperature.
 4. The two wires of the kompensatsionnyy are made of alloys, one copper-colored and the other white.
 5. The upper part of the galvanometer degree scale is inscribed "KG. Gr. 308-N". KG is an abbreviation for Kontrolnyy Galvanometr. Gr. 308-N denotes the thermocouple with which it is used.
 6. Accuracy of the electric thermometer is tested according to the following scale which gives Centigrade degrees and thousandths of volts:

t°C	MV
100	1.6
200	3.2
300	4.8
400	6.4
500	8.0
600	9.6
700	11.2
800	12.8
900	14.4
1000	16.0
1100	17.6
1200	19.2
1300	20.8
1400	22.4
1500	24.0
1600	25.6

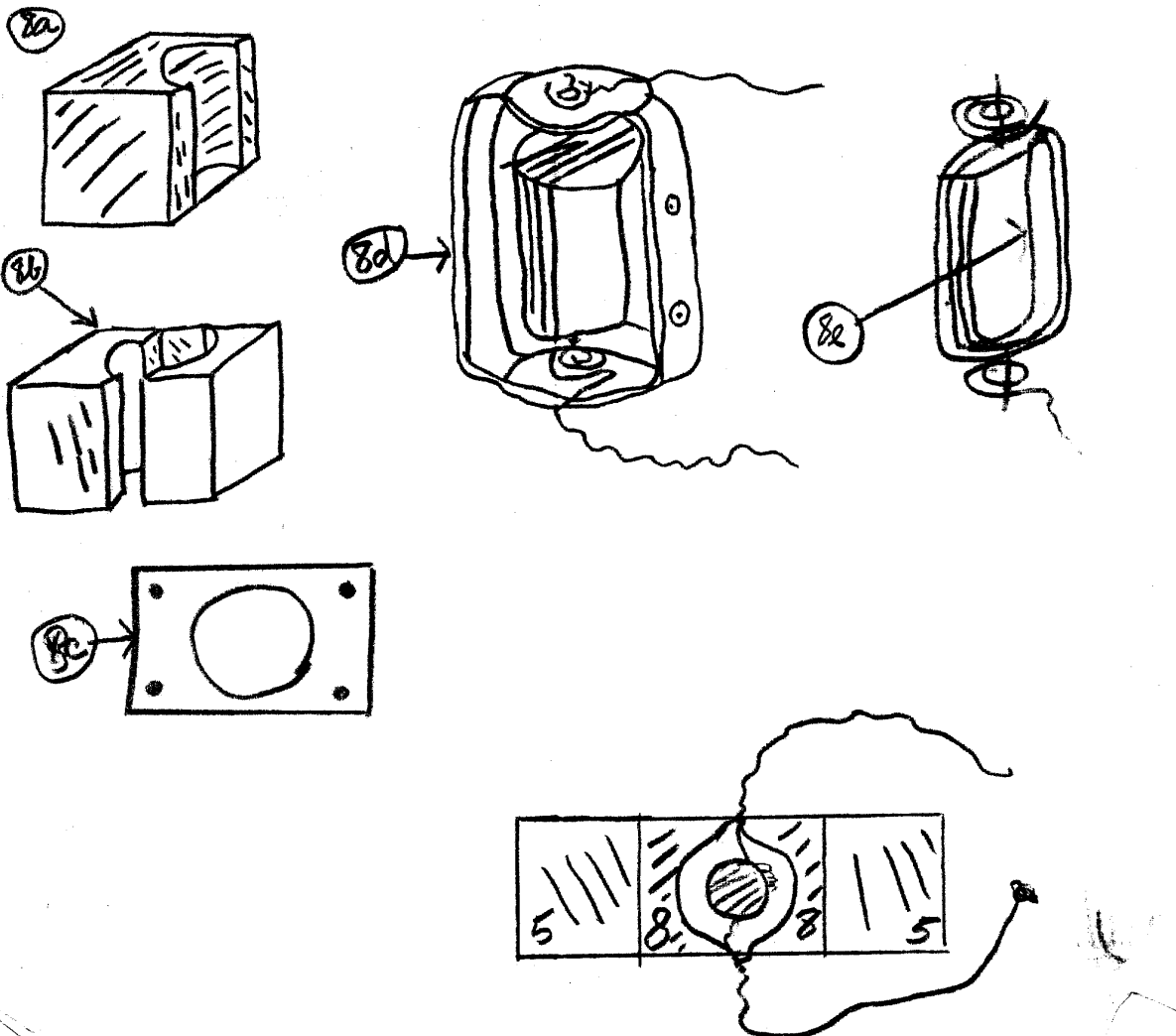
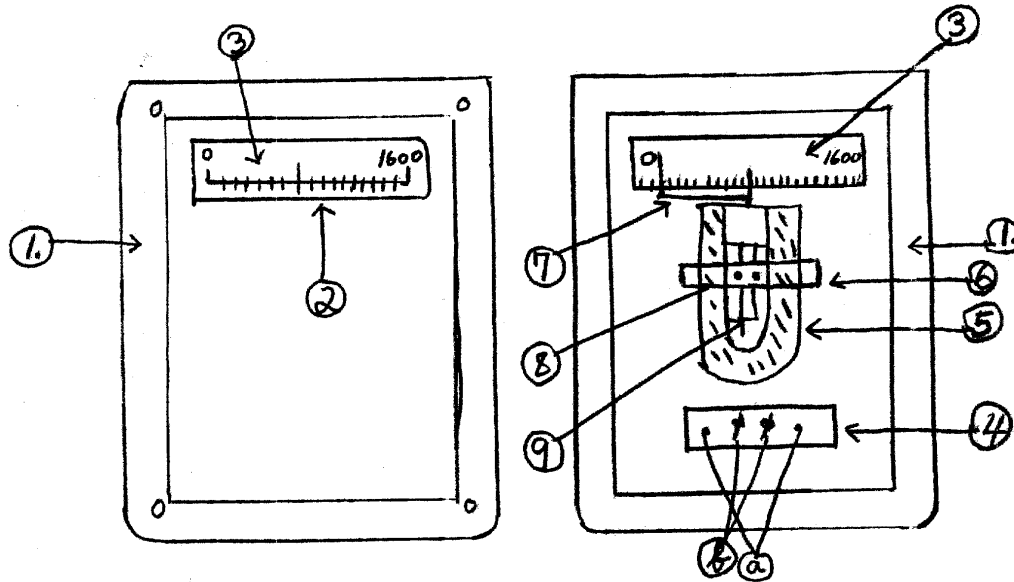
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Attachment A



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Attachment B

1. Moskva No. 1 camera has been manufactured in Russian factories since 1947 when all German camera factories in the Russian zone of Germany were moved to the Soviet Union. Moskva No. 1 is a Zeiss camera with a 1.45 lens, an 11 cm focal length, and a maximum shutter speed of 1/250th of a second. Its 6 x 9 cm film takes eight pictures and it uses no filters. The camera costs 495 rubles.
2. There are two Russian cameras of the FED type, one with a 1.20 lens and the other with a 1.35 lens. Both have a 5 cm focal distance and a maximum shutter speed of 1/500th of a second. Both use 24 x 36 mm film with 24 to 36 pictures to a film. Both use filters. They sell second-hand in State shops for 1,200 to 1,500 rubles. No unused models are for sale.

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Comment

The Moskva No. 1 mentioned above is probably the same camera that is made and advertised for sale by the VVB Mechanik (East German Ministry for Fine Mechanics and Optics) under the trade name of "Ercona". All specifications check and the Zeiss plant in the SovZone is the producing unit of the VVB. This office also wishes to correct the impression that Para. No. 1 above gives which states, "...when all German camera factories in the Russian Zone of Germany were moved to the Soviet Union..." - All German camera factories were not ~~not~~ moved to the Soviet Union.

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